

Hideaki OHBA\*: New or critical species of Asiatic Sedoideae (2)\*\*

大場秀章\*: アジア産マンネングサ亜科の分類学的研究 (2)\*\*\*

(4) On *Sedum saxifragoides* Fröd.

By the radical leaves with broadening base and the hermaphrodite flowers this species apparently belongs to the *Rhodiola primuloides* (Franch.) Fu-group of the genus *Rhodiola*. Among species of the group it is evidently related to the West Himalayan *R. pachyclados* (Aitch. et Hemsl.) H. Ohba, but differs from the latter mainly by the broadly oblong—broadly ovate calyx-lobes, by the radical leaves with entire margins, and by the transversely narrowly oblong nectar-scales. Thus *S. saxifragoides* should be regarded as a species of the genus *Rhodiola*. The following new combination becomes necessary.

***Rhodiola saxifragoides* (Fröd.) H. Ohba, comb. nov.**

*Sedum saxifragoides* Fröd. in Svensk. Bot. Tidskr. 30: 234 (1936).

Distr. Western Himalaya (Kashmir).

Specimen examined. Kashmir. Khobar (Perssm 706, GB—Isotype of *S. saxifragoides* Fröd.).

(5) On *Sedum correptum* Fröd.

It is impossible to recognise *Sedum correptum* Fröd. only by the original description; several characters described, especially on the stem, exceed the delimitation of the true *S. correptum*. By the courtesy of the director of Botanical Museum, Göteborg (GB) I had an opportunity to examine an isotype specimen of *S. correptum* Fröd. The specimen is indeed a mixture of plants consisting of both true *S. correptum* and a previously undescribed species of *Rhodiola*. The most rejectable part in the original description for the circumscription of *S. correptum* is coincident with the species of *Rhodiola*, *R. Handelii* (sp. nov.). *R. Handelii* is quite different from *S. correptum* in both floral and vegetative characters as follows:

*Rhodiola Handelii*: Rhizomes with both foliage and scaly radical leaves

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present. Calyx-lobes conspicuously spurred. Petals triangular-ovate to oblong-ovate, 2.5-2.7 mm long. Stamens 10. Ovary half-inferior.

*Sedum correptum*: Rhizomes and radical leaves absent. Calyx-lobes spurred. Petals narrowly elliptic, 3.2-3.5 mm long. Stamens 5, alternate with the petal. Ovary superior.

*Rhodiola Handelii* is apparently an ally of *R. primuloides* (Franch.) Fu, but differs from others in having 1) the conspicuously spurred calyx-lobes, 2) the higher connate ovaries, 3) the oblong-ovate—triangular-ovate petals, and 4) the spurred radical foliage leaves. Thus *R. Handelii* is described as a new species. On the other hand, the redescription of *Sedum correptum* Fröd. is necessary for its circumscription.

(a) *Sedum correptum* Fröd. in Hand.-Mzt., Symb. Sin. 7: 409, fig. 11 (1931); in Act. Hort. Gothob. 6: append. 39, fig. 274-283, Pl. 19-3 (1931), pro parte maj.

[Description revised] Herba perennis, 2-4 cm alta. Caules carnosí teretes ca. 1 mm lati, glabri sed dense papillati, adscendentes—suberecti sed basi repentes. Folia alterna ± dense disposita, patentia—adscendentia sessilia ecalcarata, spatulata—angusti-ovata apice rotundata margine integra, 5-6.5 mm longa 1.3-1.6 mm lata, complanata glabra, sub lente (magnificatione × 40) utrinque dense papillata (papillis brevioribus quam 0.1 mm longioribus). Inflorescentiae terminales vel axillares racemosae, floribus 3-6 sparse ornatae, bracteatae; bracteis foliis caulis similaribus sed minoribus. Flores hermafroditici 5-partiti aestivales pedicellati, pedicello 1.5-2 mm longo tereti laevi —± tuberculato. Calyx 2-2.5 mm longus viridis glaber—± laevis, tubo ca. 0.3 mm longo basi truncato; lobis 1.6-2 mm longis 0.3-0.5 mm latis, anguste oblongis—lanceolatis apice triangularibus (apice ipso obtuso) margine integris complanatis, sub anthesi adscendentibus. Petala alba membranacea distincta, angusti-elliptica apice acuta—brevi-acuminata margine integra, 3.2-3.5 mm longa 0.9-1.2 mm lata, cymbiformia, sub anthesi adscendentia. Stamina 5, petalis alterna, sub anthesi erecta, filamentis filiformibus ca. 1.8-2 mm longis, antheris ovatis apice ± retusis ca. 0.4 mm longis, ante anthesin aurantiacis. Glandulae anguste oblongae—lineares complanatae ca. 0.8 mm longae ca. 0.3 mm latae, in vivo probabiliter luteolae. Gynoecia 2.5-3 mm longa, basi leviter connata, ovario sine gibbositate, stylo ca. 0.5 mm longo, placenta marginali. Ovula in quoque loculo 8-10, ca. 0.6 mm longa angusti-ovata apice ± elon-

gata. Folliculi 3.2-3.5 mm longi. Semina anguste obovata apice longe elongata 1.3-1.4 mm longa, testa brunnea, sub lente (magnificatione  $\times 45$ ) longitudinaliter striata.

Distr. Eastern Himalaya (Bhutan) and S. W. China (Yunnan & Szechuan).

Specimens examined. Bhutan. Laya, upper Mo Chu, alt. 11500 ft. On dry rocks and cliffs (Ludlow, Sherriff & Hicks 16459, BM). Yunnan. Chun-chuan-Mekong divide ( $26^{\circ}30'N$ ,  $99^{\circ}40'E$ ), alt. 13000 ft. On ledges of cliffs and humus covered boulders in shady side valleys (Forrest 22374, E). Szechuan. Yalung, alt. 4159-4300 m (Handel-Mazzetti 2674 (a part), GB-Isotype).

*Sedum correptum* is apparently related to *S. elatinoides* Franch., but it differs from the latter in having 1) the dwarf, close set growing habit, 2) very short stems, 3) densely arranged, spatulate—narrowly obovate leaves, 4) elliptic petals, 5) haplostemonous stamens alternate with the petals, and 6) seeds with an elongate apex. Although *S. correptum* is disjunctively distributed in Eastern Himalaya and S. W. China, no significant difference between the Himalayan and Chinese plants is found.

(b) **Rhodiola Handelii<sup>1)</sup>** H. Ohba, sp. nov.

A speciebus gregis *Rhodiola primuloides* (Franch.) Fu lobis calycis conspicue calcaratis (calcar quadratus—quadri-ovatus, longitudine 1/4 calycis partem aequans), ovariis alte connatis, petalis oblongi-ovatis—triangulari-ovatis, calcaribus foliorum radicalium lunatis ca. 0.6 mm longis 1.5-1.7 mm latis statim distinguenda.

Planta perennis pygmaea ad 1.5 cm alta. Rhizoma ± cylindraceum 5-10 mm longum 5-10 mm latum ramosum. Rosula 3-5 mm dimetiente, foliis radicalibus 20-40 composita. Folia radicalia petiolata calcarata suberecta—erecta, decidua sed parte basali marcescentia; petiolo 4-5.5 mm longo, laminam longitudine superanti, parte mediana ca. 0.4 mm lato, versus basim valde dilatato, basi 1.5-1.7 mm lato, brunneo; calcari lunato ca. 0.6 mm longo 1.5-1.7 mm lato brunneo; lamina oblonga apice rotundata 1.5-3.5(-4) mm longa 0.8-1.7 mm lata. Folia squamosa triangularia calcarata (calcari lunato ca. 0.5 mm longo 2-2.5 mm lato) apice obtusa 1.6-2 mm longa 2-2.5 mm lata. Caules floriferi decidui quotannis, 0.9-1.5 cm longi ca. 0.7 mm lati erecti simplices glabri

1) Nomen hoc dedi in honorem Dr. Heinrich von Handel-Mazzetti (1882-1940).

laeves. Folia caulina alterna sessilia ecalcarata spathulata—oblanceolata apice rotundata basi longe attenuata 3.5–4 mm longa 1–1.3 mm lata laevia. Inflorescentia cymosa terminalis, floribus 1(–3) ornata, bracteata. Bractea angustissime oblanceolata ca. 1.5 mm longa ca. 0.5 mm lata. Flores hermaphroditici 4-partiti erecti—adscendentes, 3–3.5 mm diametro. Calyx 3.2–3.7 mm longus basi truncatus conspicue calcaratus; lobis angusti-ovatis—angusti-oblongo-ovatis apice rotundatis, 2.3–2.6 mm longis ca. 1 mm latis, suberectis per anthesim, calcari quadrato—quadri-ovato ca. 0.8 mm longo. Petala distincta triangulari-ovata—oblongo-ovata apice mucronata (—obtusa), 2.5–2.7 mm longa 1.4–1.7 mm lata, (?)alba. Stamina 10, 2.2–2.5 mm longa erecta, filamentis subulatis, antheris basifixis ovatis apice rotundatis ca. 0.6 mm longis, ante anthesin (?)roseis. Glandulae oblongae 1–1.2 mm longae 0.5–0.7 mm latae apice irregulariter retusae—erosae, roseae. Gynoecia 2.2–2.5 mm longa, basi longitudine 0.8–1 mm connata, ovario ca. 0.7 mm lato, in stylum strictum ca. 0.5 mm longum gradatim desinente, placenta marginali. Ovula in quoque loculo 8–10, ca. 0.5 mm longa, apice rotundata.

Holotypus: China. Szechuan. Yalung, alt. 4150–4300 m (Handel-Mazzetti a part of no. 2674 on 27 May 1914, GB).

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(4) Kashmir 産の *Sedum saxifragoides* Fröd. は *Rhodiola pachyclados* (Aitch. et Hemsl.) H. Ohba に近縁なものである。しかし根生葉、がく片、蜜腺の形などが異なり別種として区別した。そこで ***Rhodiola saxifragoides* (Fröd.) H. Ohba** (新組合せ) の学名が必要となる。

(5) *Sedum correptum* Fröd. の原記載には実際の植物と合致せぬ点がいくつかあり、基準標本を再検討してみたかった。幸い Göteborg 植物博物館 (GB) にその副基準標本があり借用することができた。はたしてそれは明らかに異なる 2 種類が混ったものであった。いずれも高さ 2 cm 位の小さな植物であるが、その 1 種は根生葉を生じる根茎をもち明らかにイワベンケイ属 *Rhodiola primuloides* 群のものである。しかし根生葉とがく片に顕著な距があるなど既知のものにはみられぬ特徴を有する。そこで新種と考え ***Rhodiola Handelii*** と命名した。他方、*Sedum correptum* のやや詳しい記載を欧文欄に発表した。